

**Listing of Claims:**

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Claim 1 (Canceled).

2. (Previously Presented) An image sensing apparatus for a microscope, comprising:

B' an image sensing unit for sensing an observation image obtained by a microscope and obtaining the observation image;

5 a microscopy technique determination unit for detecting a microscopy technique in the microscope;

a chromaticity determination unit for determining chromaticity of the observation image based on the microscopy technique detected by said microscopy technique determination unit, and determining a region where color balance is to be  
10 adjusted in the observation image; and

a color balance adjustment unit for adjusting color balance in accordance with a color balance adjustment amount arbitrarily set for the region of the observation image determined by said  
15 chromaticity determination unit.

3. (Previously Presented) The apparatus according to claim 2, further comprising:

a luminance distribution determination unit for calculating a luminance distribution of the observation image based on the

5 microscopy technique detected by said microscopy technique  
determination unit, and determining from the luminance  
distribution a region where tone is to be corrected in the  
observation image; and

10 a tone adjustment unit for correcting tone in accordance  
with a tone correction amount arbitrarily set for the region of  
B' the observation image determined by said luminance distribution  
determination unit.

4. (Previously Presented) The apparatus according to  
claim 2, further comprising:

a display unit for displaying the observation image obtained  
by said image sensing unit;

5 a white balance correction unit for correcting white balance  
for the observation image sensed by said image sensing unit;

a position designation unit for designating a desired  
position in the observation image displayed on said display unit;  
and

10 a control unit for detecting white balance based on image  
data at the position designated by said position designation  
unit, and controlling said white balance correction unit.

Claims 5-9 (Canceled).

10. (Previously Presented) An image sensing apparatus for a microscope, comprising:

an image sensing unit for sensing an observation image obtained by a microscope and obtaining the observation image;

5 a microscopy technique determination unit for detecting a microscopy technique in the microscope;

8' a luminance distribution determination unit for calculating a luminance distribution of the observation image based on the microscopy technique detected by said microscopy technique determination unit, and determining from the luminance distribution a region where tone is to be corrected in the observation image; and

10 a tone adjustment unit for correcting tone in accordance with a tone correction amount arbitrarily set for the region of the observation image determined by said luminance distribution determination unit.

11. (Previously Presented) The apparatus according to claim 10, wherein when a fluorescent observation state is detected by the microscopy determination unit,

5 the luminance distribution determination unit identifies a low-luminance range representing a background and an intermediate-luminance range representing a fluorescent specimen part, from the luminance distribution of the observation image,

and determines a boundary between the low-luminance range and the intermediate-luminance range, and

10        the tone adjustment unit performs an arbitrarily set tone correction on the fluorescent specimen part.

B1        12. (Previously Presented) The apparatus according to claim 10, wherein when a transmission bright-field observation state is detected by the microscopy technique determination unit,

5        the luminance distribution determination unit identifies a high-luminance range representing a background and at least one of a low-luminance range and an intermediate-luminance range representing a bright-field specimen part from the luminance distribution of the observation image, and determines a boundary between the high-luminance range and the at least one of the low-  
10        luminance range and the intermediate-luminance range, and

      the tone adjustment unit performs an arbitrarily set tone correction on the bright-field specimen part.

13. (Previously Presented) The apparatus according to claim 11, wherein the tone adjustment unit performs a tone-expanding correction on the fluorescent specimen part.

14. (Previously Presented) The apparatus according to claim 12, wherein the tone adjustment unit performs a tone-expanding correction on the bright-field specimen part.

15. (New) The apparatus according to claim 10, further comprising:

a display unit for displaying the observation image obtained by the image sensing unit;

5 a white balance correction unit for correcting white balance for the observation image sensed by the image sensing unit;

B' a position designation unit for designating a desired position in the observation image displayed on the display unit; and

10 a control unit for detecting white balance based on image data at the position designated by the position designation unit, and controlling the white balance correction unit.

16. (New) An image sensing apparatus for a microscope, comprising:

an image sensing unit for sensing an observation image obtained by a microscope and obtaining the observation image;

5 a display unit for displaying the observation image obtained by the image sensing unit;

a microscopy technique determination unit for detecting a microscopy technique in the microscope;

10 a chromaticity determination unit for determining chromaticity of the observation image based on the microscopy technique detected by the microscopy technique determination

unit, and determining a region where color balance is to be adjusted in the observation image;

15 a color balance adjustment unit for adjusting color balance in accordance with a color balance adjustment amount arbitrarily set for the region of the observation image determined by the chromaticity determination unit;

B) a luminance distribution determination unit for calculating a luminance distribution of the observation image based on the  
20 microscopy technique detected by the microscopy technique determination unit, and determining from the luminance distribution a region where tone is to be corrected in the observation image;

25 a tone adjustment unit for correcting tone in accordance with a tone correction amount arbitrarily set for the region of the observation image determined by the luminance distribution determination unit;

a white balance correction unit for correcting white balance for the observation image sensed by the image sensing unit;

30 a position designation unit for designating a desired position in the observation image displayed on the display unit; and

a control unit for detecting white balance based on image data at the position designated by the position designation unit,  
35 and controlling the white balance correction unit.

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